

A METHOD AND SYSTEM FOR WRITE CLOCK SYNCHRONIZATION IN
A DATA STORAGE SYSTEM

ABSTRACT OF THE DISCLOSURE

5 A method for synchronizing newly recorded data with previously
recorded data. The method is implemented within a disk-based data storage
system. A first difference between a wobble reference signal and previously
recorded data is measured. Test data is written on a test track to measure a
second difference between the wobble reference signal and the test data. The
10 test data is written synchronously with a write clock. An offset value is
determined by comparing the first difference and the second difference. New
data is then written using the write clock and the offset value such that the
new data is synchronized with the old data. To determine the offset value, the
test data can be written to the test track with a write clock calibration delay
15 set to zero, the test data can then be read from the test track and the first
difference can be subtracted from the second difference to determine the offset
value for the write clock calibration delay. A delay offset can be inserted into a
wobble-to-laser path to cause the new data to have the same epoch as the
previously recorded data. An error value can be checked to determine whether
20 the error value is within predetermined limits, wherein the error value is the
difference between the first difference and the second difference. The write
clock can be adjusted in accordance with the error value if the error value is
outside the predetermined limits.